

What is claimed is:

1. A method for processing a voice signal in a communications network, the method comprising:

5 partially decoding a bit stream corresponding to an encoded version of the voice signal to obtain an excitation parameter corresponding to the voice signal; and
estimating a noise level of the voice signal using the excitation parameter as input.

2. The method according to claim 1, wherein the excitation parameter
10 comprises a fixed codebook excitation component.

3. The method according to claim 1, wherein the excitation parameter comprises a fixed codebook gain table index.

15 4. The method according to claim 1, wherein the excitation parameter comprises a fixed codebook gain parameter.

5. The method according to claim 4, further comprising the step of multiplying the fixed codebook gain parameter by a scaling factor.

20 6. The method according to claim 5, wherein the scaling factor is a constant value.

25 7. The method according to claim 6, wherein the constant value is approximately 0.3.

8. The method according to claim 1, wherein the excitation parameter comprises a fixed codebook gain component and an adaptive codebook gain component.

30 9. The method according to claim 8, further comprising the step of multiplying the fixed codebook gain component by a scaling factor.

10. The method according to claim **9**, wherein the scaling factor is a variable scaling factor.

5 **11.** The method according to claim **10**, further comprising the step of computing the variable scaling factor as a function of the adaptive codebook gain component.

12. A method for estimating noise in a speech signal in a communications network, wherein the speech signal is encoded and transported through the network as a bit stream, the method comprising:

partially decoding the bit stream to obtain a fixed codebook excitation component and an adaptive codebook excitation component corresponding to the encoded speech signal; and

15 estimating a noise level of the speech signal based on the fixed codebook excitation component and the adaptive codebook excitation component.

13. The method according to claim **12**, further comprising the step of scaling the fixed codebook excitation component according to a constant value.

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14. The method according to claim **12**, further comprising the step of scaling the fixed codebook excitation component as a function of the adaptive codebook excitation component.

25 **15.** An apparatus for processing a speech signal, the apparatus comprising:
a decoder for extracting an excitation parameter from a bit stream corresponding to an encoded speech signal; and
a noise estimator operable to estimate a noise level in the speech signal using the excitation parameter as input.

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16. The apparatus according to claim **15**, wherein the excitation parameter comprises a parameter selected from the group consisting of a fixed codebook

excitation component, a fixed codebook gain table index, and a fixed codebook gain parameter.

5 **17.** The apparatus according to claim **15**, further comprising a multiplier element operable to multiply the excitation parameter by a scaling factor.

18. The apparatus according to claim **17**, wherein the scaling factor is a constant value.

10 **19.** The apparatus according to claim **15**, wherein the excitation parameter comprises a fixed codebook gain component and an adaptive codebook gain component.

20. The apparatus according to claim **19**, further comprising a multiplier
15 element operable to multiply the fixed codebook gain component by a scaling factor.

21. The apparatus according to claim **20**, wherein the scaling factor is variable as a function of the adaptive codebook gain component.